

PTO/SB/08a (08-03)

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Complete if Known | | |
| | | | Application Number | 10/709,010 | |
| | | | Filing Date | April 7, 2004 | |
| | | | First Named Inventor | Matthew J. Murray | |
| | | | Art Unit | 2643 | |
| Sheet | 1 | of | 1 | Examiner Name | |
| | | | | Attorney Docket Number | U03-0134.65 |

| U.S. PATENT DOCUMENTS | | | | | |
|--------------------------------|-----------------------|---|--------------------------------|--|---|
| Examiner Initials ¹ | Cite No. ¹ | Document Number Number-Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | US- | | | |
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| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------------|-----------------------|--|--------------------------------|--|---|----------------|
| Examiner Initials ¹ | Cite No. ¹ | Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
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| NON PATENT LITERATURE DOCUMENTS | | | |
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| Examiner Initials ¹ | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
| la | | Sony Ericsson Mobile Communications AB, International Application No., PCT/US2004/038031, Written Opinion, March 30, 2005. | |
| la | | Sony Ericsson Mobile Communications AB, International Application No., PCT/US2004/038031, International Search Report, March 30, 2005. | |
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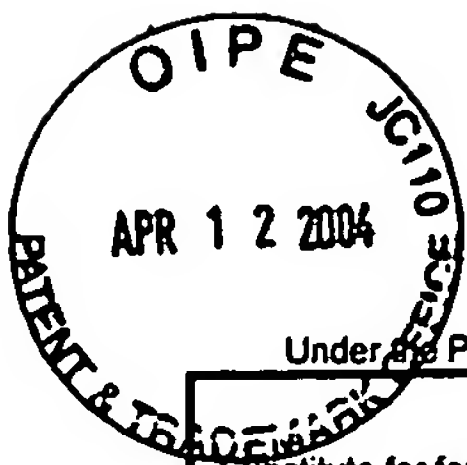
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| Examiner Signature | | Date Considered | 9/17/06 |
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**INFORMATION DISCLOSURE
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Sheet 1 of 2

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|---|---|--|-----------------|--------------------------------|--|---|---|
| | | Number-Kind Code ² (if known) | | | | | |
|  | A | US- 6,332,029 | | 12/18/2001 | Azlma et al. |  | |
| | B | US- 6,192,138 | | 02/20/2001 | Azlma et al. |  | |
| | C | US- 6,522,760 | | 02/18/2003 | Azlma et al. |  | |
| | D | US- 6,151,402 | | 11/21/2000 | Azlma et al. |  | |
| | E | US- 6,389,935 | | 05/21/2002 | Azlma et al. |  | |
| | F | US- 6,606,380 | | 08/12/2003 | Azlma |  | |
| | G | US- 2003/0059080 A1 | | 03/27/2003 | Backman |  | |
| | H | US- 6,434,237 | | 08/13/2002 | Murray |  | |
| | I | US- 2003/0059069 A1 | | 03/27/2003 | Bank et al. |  | |
| | J | US- 2002/0064280 A1 | | 05/30/2002 | Reynaga et al. |  | |
| | K | US- 2002/0193137 A1 | | 12/19/2002 | Bank et al. |  | |
| |  | L | US-6,353,733 B1 | | 03/05/2002 | Murray et al. |  |
| | | M | US-6,266,542 B1 | | 07/24/2001 | Stern et al. |  |
| | | | US- | | | | |
| | | | US- | | | | |
| | | | US- | | | | |
| | | | US- | | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initials ¹ | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
|-----------------------------------|--------------------------|---|--------------------------------|--|---|----------------|
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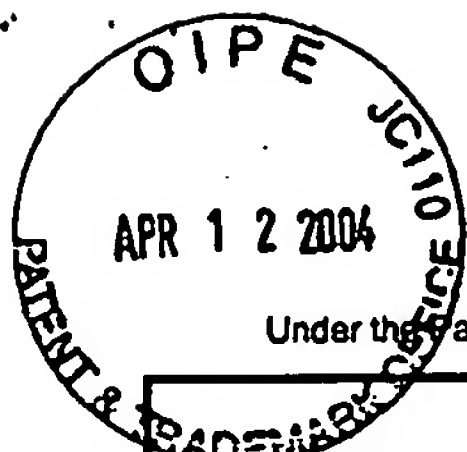
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| | | | | Attorney Docket Number | U03-0134.65 |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|--------------------------|---|----------------|
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| <i>M</i> | N | www.maxim-ic.com/appnotes.cfm/appnote.number/988/in/en (visited 11/4/03); Maxim Website, Driving Audio Piezoelectric Transducers. | |
| | O | www.elac.com/en/products/imago/dml.html (visited 11/4/03) | |
| | P | www.murata-northamerica.com/murata/murata.nsf/pdf/addproducts/\$file/techbriefprezo042302.pdf(visited 11/4/03); MuRata's Piezoelectric Sound Components, by Shay Ashmon. | |
| | Q | www.murata.com/catalog/p15e6.pdf (Visited 11/4/03) | |
| | R | www.lordcorp.com (visited 11/03); Product Section | |
| | S | www.nxtplc.com (visited 10/29/03); Siemens Display Speaker Case Study | |
| | T | www.nxtplc.com (visited 10/29/03); NXT Distributed Mode Loudspeakers | |
| | U | www.nxtplc.com (visited 10/29/03); NXT's Sound Vu Technology | |
| | V | www.nxtplc.com (visited 11/6/03); DMA exciter case study | |
| | W | www.nxtplc.com (visited 11/6/03); The DMA exciter | |
| <i>M</i> | X | www.dba-pr.com/clients/nxt-plc/releases/siemensphone.htm (visited 10/29/03); Major Milestone in Mobile Comms as Siemens Showcases Mobile Phone Using NXT Technology, by Franklyn Roth. | |

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| Examiner Signature | <i>[Signature]</i> | Date Considered | 9/17/06 |
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